

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

LISTING OF CLAIMS:

Claim 1. (Currently amended) A process for producing canthaxanthin and echinenone, which comprises:

(a) cultivating in an aqueous nutrient medium a recombinant *Xanthophyllomyces dendrorhous* (*Phaffia rhodozyma*) microorganism that comprises a polynucleotide sequence that encodes a β -carotene ketolase, wherein β -carotene accumulates in the medium under aerobic conditions[[,]] and wherein the cultivation is carried out at a pH in the range of from 5 to 7 and at a temperature in the range of from 18 to 22°C for 48 to 350 hours, and

(b) isolating carotenoids from the recombinant microorganism or from the medium, wherein the polynucleotide sequence is originated from a microorganism which is selected from the group consisting of *Agrobacterium aurantiacum*, *Alcaligenes* PC-1, *Paracoccus marcusii* MH1, a gram-negative bacteria E-396 (FERM BP-4283), and *Haematococcus pluvialis*.

Claim 2. (Previously presented) The process according to claim 1, wherein the recombinant microorganism is derived from *Xanthophyllomyces dendrorhous* (*Phaffia rhodozyma*) ATCC96815.

Claim 3. (Cancelled).

Claim 4. (Previously presented) The process according to claim 1, wherein the polynucleotide sequence that encodes the β -carotene ketolase is originated from *Alcaligenes* PC-1.

Claim 5. (Previously presented) The process according to claim 1, wherein the polynucleotide sequence is expressed in the recombinant microorganism using a control sequence.

Claims 6-7. (Cancelled).

Claim 8. (Previously presented) The process according to claim 1, wherein the isolated carotenoids comprise canthaxanthin and echinenone.